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WHAT IS CLAIMED IS:

1. An implantable medical device adapted to be implanted in a patient for detecting and declaring syncopal episodes comprising:
- 5 means for detecting a respiration parameter of the patient;
- means for detecting heartbeats and for producing sense event signals related thereto;
- heart rate determining means for determining a current heart rate based upon the intervals between successive sense event signals;
- 10 means for selecting a threshold heart rate drop as a function of the detected respiration parameter of the patient; and
- heart rate drop sensing means for sensing a drop in intrinsic heart rate from the average heart rate that exceeds the threshold heart rate drop and declaring a syncopal episode.
- 15 2. The implantable medical device of Claim 1, wherein the respiration parameter comprises respiration rate and the function of the detected respiration parameter comprises an increase in respiration rate exceeding a respiration rate of change threshold.
- 20 3. The implantable medical device of Claim 1, wherein the respiration parameter comprises tidal volume and the function of the detected respiration parameter comprises an increase in tidal volume exceeding a tidal volume rate of change threshold.
- 25 4. An implantable medical device adapted to be implanted in a patient for detecting and treating syncopal episodes comprising:
- means for detecting a respiration parameter of the patient;
- 30 means for detecting heartbeats and for producing sense event signals related thereto;

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heart rate determining means for determining a current heart rate based upon the intervals between successive sense event signals;

means for selecting a threshold heart rate drop as a function of the detected respiration parameter of the patient;

heart rate drop sensing means for sensing a drop in intrinsic heart rate from the average heart rate that exceeds the threshold heart rate drop and declaring a syncopal episode; and

therapy delivery means responsive to the declared syncopal episode for delivering a therapy to counter the syncopal episode.

5 5. The implantable medical device of Claim 4, wherein the respiration parameter comprises respiration rate and the function of the detected respiration parameter comprises an increase in respiration rate exceeding a respiration rate of change threshold.

10 6. The implantable medical device of Claim 4, wherein the respiration parameter comprises tidal volume and the function of the detected respiration parameter comprises an increase in tidal volume exceeding a tidal volume rate of change threshold.

15 7. The implantable medical device of Claim 4 wherein the therapy delivery means comprises pacing therapy providing means for providing a pacing therapy to the patient's heart responsive to the declared syncopal episode.

20 8. The implantable medical device of Claim 7, wherein the pacing therapy providing means comprises pacing pulse generator means for generating cardiac pacing pulses at a predetermined differential rate in excess of an average heart rate value existing prior to declaration of a syncopal episode.

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9. The implantable medical device of Claim 7, wherein the pacing therapy providing means comprises pacing pulse generator means for generating cardiac pacing at a lower rate when intrinsic heart beats are not present, and for generating cardiac pacing pulses upon declaration of a syncopal episode at a predetermined differential rate in excess of the lower rate.

10. The implantable medical device of Claim 7, wherein the pacing therapy providing means comprises pacing pulse generator means for generating cardiac pacing pulses at a predetermined differential rate in excess of an average heart rate value existing prior to declaration of a syncopal episode.

11. A method of operating an implantable medical device adapted to be implanted in a patient for detecting and declaring syncopal episodes comprising:

- detecting a respiration parameter of the patient;
- detecting heartbeats and for producing sense event signals related thereto;
- determining a current heart rate based upon the intervals between successive sense event signals;
- selecting a threshold heart rate drop as a function of the detected respiration parameter of the patient; and
- sensing a drop in intrinsic heart rate from the average heart rate that exceeds the threshold heart rate drop and declaring a syncopal episode.

12. The method of Claim 11, wherein the respiration parameter comprises respiration rate and the function of the detected respiration parameter comprises an increase in respiration rate exceeding a respiration rate of change threshold.

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13. The method of Claim 11, wherein the respiration parameter comprises tidal volume and the function of the detected respiration parameter comprises an increase in tidal volume exceeding a tidal volume rate of change threshold.

14. A method of operating an implantable medical device adapted to be implanted in a patient for detecting and treating syncopal episodes comprising:

detecting a respiration parameter of the patient;

detecting heartbeats and for producing sense event signals related thereto;

determining a current heart rate based upon the intervals between successive sense event signals;

selecting a threshold heart rate drop as a function of the detected respiration parameter of the patient;

sensing means for sensing a drop in intrinsic heart rate from the average heart rate that exceeds the threshold heart rate drop and declaring a syncopal episode; and

delivering a therapy to counter the syncopal episode.

15. The method of Claim 14, wherein the respiration parameter comprises respiration rate and the function of the detected respiration parameter comprises an increase in respiration rate exceeding a respiration rate of change threshold.

16. The method of Claim 14, wherein the respiration parameter comprises tidal volume and the function of the detected respiration parameter comprises an increase in tidal volume exceeding a tidal volume rate of change threshold.

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17. The method of Claim 14, wherein the therapy delivery step comprises providing a pacing therapy to the patient's heart responsive to the declared syncopal episode.

5 18. The method of Claim 17, wherein the pacing therapy delivery step comprises generating cardiac pacing pulses at a predetermined differential rate in excess of an average heart rate value existing prior to declaration of a syncopal episode.

10 19. The method of Claim 17, wherein the therapy delivery step comprises generating cardiac pacing at a lower rate when intrinsic heart beats are not present, and generating cardiac pacing pulses upon declaration of a syncopal episode at a predetermined differential rate in excess of the lower rate.

15 20. The method of Claim 17, wherein the therapy delivery step comprises generating cardiac pacing pulses at a predetermined differential rate in excess of an average heart rate value existing prior to declaration of a syncopal episode.

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